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Geographical Results of the Emin Pasha Relief Expedition.

By H. M. Stanley.

(Address delivered at the Special Meeting in the Albert Hall, May 5th, 1890.)

Map, p. 372.

Your Royal Highnesses, Ladies and Gentlemen,

I am sure there is not a person present who, if he knew my feelings at this moment, would wish to be in my place. I stand apparently in a very desirable position, in close proximity to the heir of the throne of England and to his royal brother, the object of hearty welcome, but I feel inexpressibly grieved that I am able to render so poor a return for your kindness. Matter enough I possess to fill many hours of interest for you; but, unfortunately, I have had no time to prepare anything that I would call worthy of this great assembly. I therefore hope that, in addition to the warm welcome you have given me, you will be lenient in your judgment of the merits of what I am about to tell you this evening.

Our late journey for the relief and rescue of Emin, the Governor of Equatoria, was over 6000 miles in length, and occupied us 987 days; 500 of those days were passed in the great Central African forest, and for 487 days we lived or journeyed through grass lands. Let us talk of the forest first.

A writer on Africa lately wrote a book, wherein he said: "Day after day you may wander through these forests with nothing except the climate to remind you where you are. . . . The fairy labyrinth of ferns and palms, the festoons of climbing plants blocking the paths and scenting the forests with their resplendent flowers, the gorgeous clouds of insects, the gaily plumaged birds, the paroquets, the monkey swinging from his trapeze in the shaded bowers—these are unknown to Africa. Once a week you will see a palm; once in three months the monkey will cross your path; the flowers on the whole are few, the

trees are poor, and to be honest"—nay, if this is honest description, I must close right here. We have travelled 1670 miles through the great forest of Equatorial Africa, and we are compelled to declare that the writer's description of Africa is altogether wrong, that it bears no more resemblance to tropical Africa than the tors of Devon resemble leafy Warwickshire, the gardens of Kent, and the glorious vales of this island. Nyassaland is not Africa, but itself, and only a small section of a great continent which embraces over 11,000,000 of square miles.

Let me guide you rapidly through this forest, and I promise not to mislead you.

Its greatest length is from near Kabambarrè in South Manyuema to Bagbomo, on the Welle-Makua in west Niam-Niam, 621 English miles; its average breadth is 517 miles, which makes a compact square area of 321,057 square miles. A serpentine line through the centre of this would represent our course. This enormous tract is crammed with trees, varying from 20 feet to 200 feet high, so close that the branches interlace one another and form an umbrageous canopy. It is absolutely impenetrable to sunshine. While the sun scorches and dazzles without, a little dust of white light flickering here and there only reveals the fact. Generally it was a mystical twilight, but on misty or rainy days the page of a book became unreadable; at night one fancied that the darkness was palpable and solid. The moon and stars were of no avail to us. As there are about 150 days of rain throughout the year, and almost every rainfall except a drizzle is preceded by squalls, storms, tempests, or tornadoes, with the most startling thunder-crashes and the most vivid flashes of lightning, you may imagine that the houseless traveller in such a region must endure much discomfort.

I have passed far more hours than I would like to say spell-bound with wonder during various phases of existence within it. I have caught myself often unconsciously wondering at the strange resemblance to human life visible in the forest. It was represented here very faithfully in all its youth, vigour and decrepitude. There were trees prematurely aged and blanched, others were tumourous, others organically weak, others were hunchbacks, others suffered from poor nutrition; many were pallid and shrunk from want of air and sunshine, many were supported by their neighbours because of constitutional infirmity, many were toppling one over another as though they were the incurables of a hospital, and you wonder how they exist at all. Some are already dead, and lie buried in reeking composts of humus; some are bleached white by the palsying thunderbolt, or shivered by the levin brand or quite decapitated, or some old veteran born long before the siege of Troy is decaying in core and vitals. But the majority have the assurance of insolent youth, with all its grace and elegance of form, the mighty strength of prime life, and the tranquil pride of hoary aristocrats, or the placid endurance of ripe old age. All characters of humanity are repre-

sented here except the martyr and the suicide. Sacrifice is not within tree nature, and it may be that they only heard two divine precepts: "Obedience is better than sacrifice," and "Live and multiply."

And as there is nothing so distasteful to me as the mob of a race-day, so there is nothing so ugly in forest nature as when I am reminded of it by the selfish rush towards the sky in a clearing, the hour it is abandoned by the human owners. Hark! the bell strikes; the race is about to begin! I seem to hear the uproar of the rush, the fierce, heartless jostling and trampling, the cry "Self for self; the devil take the weakest;" to see the white-hot excitement, the noisy fume and flutter, the curious inequalities of vigour, and the shameless disregard for order and decency.

I have sat at my tent door watching the twilight deepen into a sepulchral gloom, knowing the elements were gathering for a war with the forest. I have heard the march of the storm advancing with the speed of a hurricane, and the sullen roar of the forest, as with nerves collected it swung its millions of giant heads to wrestle with it. The groaning, and rending, and crashing! I have seen the mighty swaying and surging of a countless army of tree-tops, and their leaves all quivering and rustling, and the undergrowth dancing as though in approval of the strength of its grey sires; and then I have heard the rain follow in a torrential downpour, hushing the storm and the strife, and descending in cascades from the drowning trees. We have watched the humus absorbing the rainwater as it fell, until, like a sponge, it was full, and the water rising by inches around us; and for twelve, fifteen, and eighteen hours the rain has steadily poured until it seemed as though we were never to see dry ground again. And then, after an uneasy night, wakened now and then by a falling tree which made the earth quake, or an unusual thunderclap overhead, as loud as if a planet had exploded, I have sat and watched the steaming vapour rise in blue clouds and sail up among the still foliage in ever thickening folds, and have wondered how the atmosphere would ever become clear again. Yet within a few hours the sun would be felt shining with purified lustre again; and every now and then, as some strata of foliage would be lifted by a sportive breeze, there would be subtle changes of light, and the dull green and damp leaves would shine with fitful life.

When there is so much vigorous life round about us in these eternal woods, it did seem strange to us that vegetable life was so incommunicable with our own. But yesterday we sympathised with the trees, as they roared in pain and torment, battling with the angry storm, and as they stand now so spectral and still in mute peacefulness, still so keen are our sympathies with them that one fancies there should be some mode of speech between us and them. I saw that some of them were many centuries old; some in prime life with every fibre healthy; some glorious in youth and strength; some goitrous, warty, ulcerous, stunted, and unwholesome; some slaves of slaves strangled by rigid clutch of a

pythonous parasite, the parasite in its turn bound firm with exceeding tension by a snaky creeper, and that also covered with lichen and moss; some with great sores exuding globules and pastils of gummy matter, the ants feeding on them like flies on pus; some old ancient palsied by a lightning stroke—life, death, and decay all around, as with us.

I have been absorbed in comparing the existence of some of those tree kings with events of human history. That splendid palm by the river side took root half a century before the Great Plague of London. Yonder stately bombax, springing up a head and neck above myriads, was born probably about the time of that memorable scene on Calvary. That wrinkled ironwood, four feet in diameter, was an infant under the shelter of his old sire when the tower of Babel was building.

And what office, if any, may one of these forest giants hold, whose blossoming crown and globe of foliage rises so high above the herd? Is it that of a watchman looking out for tidings? Is he the sire of the tribe? Does he herald the dawn and the morning sun, and bid the trees unfold their buds, and shake their leaves for rejoicing? Or has he gained such proud pre-eminence by his selfish and exuberant vitality? But lo! the storm approaches; there is fury and wrath, the thunderbolt falls, and the proud king falls, severed at the neck. You almost hear the cry, "The King is dead, long live the King!"

Since I have made my map, I have taken the trouble to measure the extent of the area covered by this forest, and I find it to be something like 224,000,000 acres; and if we allow each tree 30 feet around for sufficient space, and only forty-eight trees to the acre, we have the colossal figure of ten thousand seven hundred and fifty-two millions as the total number; and if we calculate the plants and saplings of the impenetrable undergrowth, we shall be among the incalculable billions.

The longevity of the animal creation found in the rivers and shades of these aged woods is something worth glancing at. The elephant and the hippopotamus and the crocodile may boast of their 400 years of life; the tortoise, a century; the buffalo, fifty years; the crows, eagles, ibis, and touracos, nearly a century; the parrot, heron, and flamingo, sixty years.

From the chimpanzees, baboons, and monkeys, with which the forest abounds, is but a step, according to Darwinism, to the pigmy tribes whom we found inhabiting the tract of country between the Ihuru and Ituri rivers. They were known to exist, by the Father of poets, nine centuries before the beginning of the Christian era. You may remember Homer wrote about the sanguinary battle that was reported to have taken place between the pigmies and the storks. In the fifth century before Christ, Herodotus described the capture of five young explorers from the Nasamones, while they were examining some curious trees in the Niger basin; and how the little men took them to their villages and showed them about to their fellow pigmies, much as you would like us to show the pigmies about England. The geographer Hekatæus, in the

fifth century, located the pigmies near the equator of Africa, under the shadows of the Mountains of the Moon; and I find that, from Hipparchus downward, geographers have faithfully followed the example of Hekatæus; and nearly a year ago we found them where they had been located by tradition, under the names of Watwa and Wambutti. The forest which we have been just considering extends right up to the base-line of the Mountains of the Moon.

We were just now paying due reverence to the kings of the forest who were born before the foundations of the Tower on Shinar plain were laid, and because it seemed to us that in their life they united pre-historic times to this society-journal-loving nineteenth century. Let us pause a little, and pay honour to those little people who have outlived the proud Pharaohs of Egypt, the chosen people of Palestine, and the Emperors of Babylon, Nineveh, Persia, and the Macedonian and Roman Empires. They have actually been able to hold their lands for over fifty centuries. I have lately seen the wear and tear on the Pyramids of Egypt, and I can certify that the old Sphinx presents a very battered appearance indeed; but the pigmies appeared to me as bright, as fresh, and as young as the generation which Homer sang about.

You will therefore understand that I, who have always professed to love humanity in preference to beetles, was as much interested in these small creatures as Henry Irving might be in the personnel of the Lyceum. Near a place called Avetiko, on the Ituri river, our hungry men found the first male and female of the pigmies, squatted in the midst of a wild Eden, peeling plantains. You can imagine what a shock it was to the poor little creatures at finding themselves suddenly surrounded by gigantic Soudanese, 6 feet 4 inches in height, nearly double their own height and weight, and black as coal; but my Zanzibaris—always more tender-hearted than Soudanese—prevented the clubbed rifle and cutlasses from extinguishing their lives there and then; and brought them to me as prizes, in the same spirit as they would have brought a big hawkmoth, or mammoth longicorn for inspection. As they stood tremblingly before me, I named the little man Adam, and the miniature woman Eve—far more appropriate names in the wild Eden on the Ituri than those of Vukukuru, and Akiokwa, which they gave us. As I looked at them and thought how these represented the oldest people on the globe, my admiration would have gone to greater lengths than scoffing cynics would have expected. Poor Greekish heroes and Jewish patriarchs, how their glory paled before the ancient ancestry of these mannikins! Had Adam known how to assume a tragic pose, how fitly he might have said, "Yea, you may well look on us, for we are the only people living on the face of the earth who from primeval time have never been removed from their homes. Before Yusuf and Mesu were ever heard of, we lived in these wild shades from the Nile Fountains to the Sea of Darkness; and, like the giants of the forest, we despise Time and Fate."

But, poor little things, they said nothing of the kind. They did not know they were heirs of such proud and unequalled heritage. On the contrary, their faces said clearly enough, as they furtively looked at one and the other of us, "Where have these big people come from? Will they eat us?" There were some nervous twitches about the angles of the nose, and quick upliftings of the eyelids, and swift searching looks to note what was in store for them. It is not a comfortable feeling which possesses a victim in the presence of a possible butcher, and a possible consumer of its flesh. That misery was evident in the little Adam and Eve of the African Eden. The height of the man was four feet, that of the woman a little less. He may have weighed about 85 pounds. The colour of the body was that of a half-baked brick, and a light brown fell stood out very clearly. So far as natural intelligence within his limited experience, he was certainly superior to any black man in our camp. The mysteries of woodcraft, for instance, he knew better than any of us. He knew what wild fruits were wholesome, and what fungi were poisonous. He could have given us valuable lessons how to find our way through the forest. I saw also that he could adapt himself to circumstances. If the pot was to end him, a very little shrinking only would betray his fear of pain; if he were to be treated affectionately, none could be so ready to appreciate affection and kindness.

We began to question him by gestures. Do you know where we can get bananas? He catches the cue; he grasps his leg to show us the size, and nods his head rapidly, informing us that he knows where to find bananas of the size of his leg. One sees that he can exaggerate as well as Mark Twain. We point to the four quarters of the compass questioningly? He points to the sunrise in reply. Is it far? He shows a hand's length. Ah, a good day's journey without loads; two days with loads! Do you know the Ihuru? He nods his head rapidly. How far is it? He rests his right hand sideways on the elbow joint. Ah, four days' journey. Is there much food on the road. He pats his abdomen lovingly, with an artful smile, and brings his two hands to a point in front of him, from which we may infer that our paunches will become like prostrate pyramids. We ask him why Avetiko has so little food. The little man attempts to imitate the sound of gun-shots, and cries "Doooo," and we are informed quite intelligently that the devastation is due to the Manyuema.

I suppose we must have passed through as many as a hundred villages inhabited by the pigmies. Long, however, before we reached them they were deserted, and utterly cleared out. Our foragers and scouts may have captured about fifty of these dwarfs, only one of whom reached the height of 54 inches. They varied from 39 to 50 inches generally. They are so well proportioned that at first sight they might be taken for ordinary mankind; but when we place by their side a European, a Soudanese, or a Madi, they appear exceedingly diminutive. By the

side of dwarfs of mature age, a Zanzibari boy of thirteen would appear large.

The agricultural settlements in this region are to be found every nine or ten miles apart; and near each settlement, at an hour's march distance, will be found from four to eight pigmy villages, situated along the paths leading to it. The larger aborigines are very industrious and form a clearing of from four hundred to a thousand acres. Amid the prostrate forest they plant their banana and plantain bulbs. In twelve months the prostrate trees are almost hidden by the luxuriant fronds and abundant fruit of unrivalled quality, size, and flavour. It would be easy to prove that in the forest an acre of banana plants produces twenty-five times more food than an acre in wheat produces in England. The pigmies appear to be aware that a banana plantation is inexhaustible, and to think that they have as much right to the produce as the aboriginal owners. Therefore, they cling to these plantations and make the larger natives pay dearly for the honour of their acquaintance. In another manner they perform valuable service to them, by warning them of the advance of strangers and assisting them to defend their settlements; they also trap game and birds, and supply the larger natives with peltry, feathers, and meat. It appeared to me that the pigmies were regarded somewhat as parasites, whose departure would be more welcome than their vicinity. When honey, and game, meat, peltry, and feathers get low or scarce in the neighbourhood, the pigmies pack their household goods on their women's backs, and depart elsewhere, to attach themselves to some other plantations. A forest village consists of from 20 to 100 families of pigmies, and probably, in that area between the Ihuru and Ituri rivers, there are as many as 2000 families living this nomadic and free life, in the perpetual twilight of the great and umbrageous forest of Equatorial Africa.

Having, within the brief time permissible, considered the forest and its inhabitants, let us take up the subject of the pastoral land and its tribes.

In Equatorial Africa the pasture land, adapted for cattle, generally begins at an altitude of 3200 feet above the sea; but the best and most nourishing grasses are found above 4000 feet. The forest ends completely at 3500 feet, and the land soon afterward varies from 4000 to 6000 feet, and extends in a belt parallel with the Albert Lake and between the lakes Victoria and Tanganyika down to Ukawendi, and from Abyssinia and east of the Victoria, down to the Rufiji. In the intra-lake region are the nations of Ankori, Uganda, Unyoro, Karagwé, Mpororo, Ihangiro, Uhaiya, Uzongora, Uzinja, Ruanda, Urundi, Uhha, and Unyamwezi. On the grassy plateau, parallel with Lake Albert, we found quite a mixed race, called the Bavira, Balegga, and Wahuma. The latter named differ as much in their physiognomy, customs, and characteristics from the other two, as an octoroon differs from a negro. The Wahuma are very

numerous in Unyoro and Uganda, throughout the intra-lake region, especially in Ankori. Their sole occupation is keeping cattle. As you proceed further south, and reach Unyamwezi, the Wahuma become known as Watusi. In Unyoro they are known as Waima and Wachwezi; among the Bavira and Balegga they are called Wawitu; but all the Wahuma, Wachwezi, Wawitu, and Watusi speak the same language; therefore we class them under the generic term Wahuma. They are distinguished from among the agricultural classes, with whom they live as herdsmen, by their complexion, length of limbs, small head and ears, long slender hands and feet, and regular features. Among the purest families these distinctions are very marked, the complexion being frequently like the colour of yellow ivory. They do not hesitate to tell us disdainfully that they are not hoemen, if we seek to purchase grain or potatoes from them. The produce of their dairies suffices, with a few hides, to purchase all the vegetable food they need. They will live among the hoemen and allow their cattle to graze on the pasture in the land, but will build their huts and zeribas separate, and apart altogether from the villages of the other class; they will employ female servants, or own female slaves, but they will not cohabit with them. And the Wahuma race grow side by side with the darker agricultural class without taint, by preserving their customs intact. Wheresoever they obtained the idea, they believe that the other class is infinitely below them; and absolute destruction of their communities and disruption of the families will not induce them, except on very rare occasions, to mingle their blood with any of the agricultural class. But yet, as we proceed further south, we find that at some time there has been an admixture of the two races, which has produced a composite race, which unites the characteristics of both the superior and inferior race, and who are both agriculturists and herdsmen combined, as in Europe. It has been a subject of engrossing interest to me to discover why I find among a nation in the far interior, pure negroes, a composite of the Wahuma, and negroes and the pure Wahuma. I am about to give you the deductions drawn from about 24,000 miles of travel in Abyssinia, Ashantee, the Livingstone Search, Across Africa, two Expeditions up the Congo, the Exploration of certain tracts on the East Coast, and elsewhere, with this last Expedition for the quest and rescue of Emin.

Probably many of you have had an idea that the Africans are all negroes; and I feel sure that if the various types of Africans were suddenly presented to you on this platform, you would still be ready to affirm that they were negroes; but you must permit me to say that you would commit a grave error.

I have already spoken to you of one race inhabiting that great Equatorial forest—the pigmies, who are a diminutive negro race, despite the fact that they are divided into two distinct types—the dark, long-headed, prognathous-jawed, and a lighter, round-headed, broad-faced

type. You also know the true negro of West and South-east Africa, characterised by woolly hair, expanded nose and sunken nasal ridge, fat everted lips, and exceeding prognathy. You also know the tall, war-like Zulu and Kaffir, who are not pure negroes, but negroid. You must accept them as types of the composite race I just spoke to you about.

Next comes the Mhuma, and if you wish a rough and ready picture of him you must imagine a traditional lanky New Englander, darkened with burnt cork, with a negroid wig; or plant a Zulu and a Hindu before you, and produce an Indo-African type out of the compound—features regular, hair curly but silky, small round head, shapely neck, small thin lips, small ears, slender hands and feet, tall, and perfect in figure from the knees upward. That is the representative of the Wahuma, who disdains the use of the hoe, and despises the planter and the sower, and will not intermarry with the negro and commit the awful crime of miscegenation any more than the proudest Virginian in America. They came from Abyssinia, a long time ago. They resemble the Abyssinian Somalis and Gallas. You may call them if you will Abyssinian or Ethiopic, but the comprehensive philosophic term would be Indo-African.

A fifth race is represented by the Semitic Africans, who are to be found principally among the Mahdists to-day at Darfour, Kordofan, and Dongola; and a sixth race is found among the Berberines, as represented by the Tuaregs and Bedawy of North-west Africa.

We must be satisfied for the present with concluding that the pigmies and the negroes are the primitive races of Africa; that Ethiopia in pre-historic times was invaded by various migrants from the great Aryan race; that as they multiplied they scattered southward and mixed with the negro tribes, and produced that composite race represented by the Zulus, Kaffirs, Bechuanas, Matabeles, Mafitte, Watuta, and Wanyamwezi. A later movement conveyed tribes having peculiar customs, who finding the intra-lake region best adapted for their cattle, clung to the land and its rich pasture, indifferent to the fate of the tribes or natives employed in tilling the ground, and their clannish descendants are the Indo-African Wahuma.

Among the most interesting discoveries that we were enabled to make during our late expedition, are the connection between the Lake Albert Edward and Lake Albert, the famous Mountains of the Moon, and the extension of Lake Victoria to the south-west. Lake Albert, discovered by Sir Samuel Baker in 1864, called Muta Nzigé by the natives around it, begins in N. lat. 1° 10′ or thereabouts. Near its head there enters a powerful river a hundred yards wide, nine feet deep and a current of three knots an hour. It is called the Semliki, and on following that deep sunken trough, which is a prolongation of that occupied by the Albert Lake, we find, after following a winding course of 150 miles, that it issues from another Muta Nzigé Lake, now called

Albert Edward, situated at an altitude of about 900 feet above Lake Albert, or 3307 feet above the sea. At a distance from the right bank of the Semliki river, of from 5 to 15 miles, there rises a lofty range of snowy mountains. As the snow-line on the equator is found at 15,260 feet above the sea, and as the height of snow visible above that was between 3000 and 4000 feet, the altitude of the highest peak of Ruwenzori, as the Wahuma call it, must be between 18,000 and 19,000 feet.

In the chapter on geology, which I find in your last edition of 'Hints to Travellers,' I find a very peculiar sentence, which reads, "Few, if any, geologists now believe that mountains were simply thrust up from below." All that I can say is that I am sorry for the geologists, for who that sees a pile of earth above a fox's hole will doubt that the material came from the hole? In the case of that trough, 230 miles long and 30 miles wide, 3000 feet deep, occupied by the two lakes Albert Edward and Albert, and the Semliki Valley in the midst of what was once an elevated plateau 5000 to 6000 feet above the sea, and seeing that enormous range upheaved above the plateau, who can doubt that the material came from that trough? The rocks of Ruwenzori are igneous, its serrated summits and their semicircular formation indicate the existence at one time of craters, and since the upheaval the sides have been grooved by glaciers, scoured by torrential rainfalls, and channelled into deep ravines by the threescore of streams and their affluents formed by the melted snows, and the débris has been spread over the Semliki valley and into the beds of the two lakes.

I humbly crave your pardon if I say anything extraordinary, but my exceeding interest in the subject of the Semliki Valley leads me to suggest what I am about to say, in order that some gifted person connected with geology may turn his earnest attention to this theme, and throw more light upon it. Thoroughly believing as I do that the abyss now occupied by the two lakes and Semliki Valley was formed by a sudden subsidence which compressed the vapours and gases beneath to be vented by the craters of Ruwenzori, I have been speculating as to what aspect the awful chasm bore after the volcanoes had belched their contents and formed the snowy range. Let us suppose that we are far back in the pre-historic period and looking down from the western edge of the disrupted plateau, into the profound abyss just formed. Ruwenzori is active, tall columns of smoke and fire spring up from the vents, rivers of lava pour down the sides, fragments of rock are hurled far up, and fall crashing on the slopes, thundering down to the bottom, until nearly midway between the lakes are formed dykes of congealed lava and arrested rock; and in the course of time Ruwenzori has ceased to be disturbed, and rises in a series of cones, formed of igneous rock and débris. The snows gather over what was lately molten rock, cinders, and huge fragments thrown up. The temperature in the bottom of the abyss is torrid, above the snow-line it is below zero; but the heated

vapours from below, and the hot equatorial sun effect a constant descending movement of the snow above, and ruinous avalanches roll down crashing, and formidable glaciers drive irresistibly downward, each bearing their masses of earth, to restore the material whence it came; and the tropic rains begin to score and groove, and channel and wash away the loose soil and fragments, some into the Albert Edward, and some into the Albert, and some into the valley, until at last they have arrived at the summit of their obstructions, at their respective northern extremities, and when they are brimful they run over—the Albert northward, through the lower level of the uplands north of Tunguru, the Albert Edward over the obstructive dykes in the Semliki Valley—and when that period has arrived let us try and discover what means we have at present for measuring the lapse of time. Thirteen years ago the French missionaries settled on Lake Victoria, and since then they have found that the lake has subsided three feet, which would be equal to two inches and eight-tenths of an inch per annum. If the upland at the north end of Lake Albert had then an average altitude of 2000 feet above the present level of the lake, it has required 8666 years for Lake Albert to reach its present stage, that is if the White Nile, escaping from the north end, has worn away its reefs and dykes at the same rate that the Victoria Nile has worn the lip of its rocky obstructions at the Ripon Falls.

We have a second means of guessing within a certain number of centuries, the age of the elapsed period, in that recent increase in the extent of the Semliki Valley at the head of Lake Albert, and the exposure of the terrace at the south-west end, which rises gradually from the edge of the lake to the base of the plateau wall that suddenly rises 2500 feet behind it. From the south end of the lake to the edge of the dense tropical forest, there are about 30 miles in a straight line; the rise of the land is at the rate of two feet in a mile. For 20 miles of the distance the old bed of the lake is covered with poor innutritious grass; for the remaining 10 miles it is covered with scrubby acacias which gradually become a thin forest, mixed with euphorbia and tamarinds which are hardy trees. The forest gradually becomes thicker and more umbrageous, and here and there is a borassus palm. To expose that 30 miles of lake-bed, I estimate that it required between 260 and 300 years, and that length of time to enable the tropic rains to scour the salts and acrid properties from the earth in a sufficient quantity to enable those palms and tamarinds to grow. On proceeding southward from the southern edge of the lake we first see soft alluvial mud deposited by the Semliki, then a saline earth uncovered, then scant feeble grass, which as we proceed becomes richer and taller. At 20 miles we see a few acacia scrubs dotting the plain every 400 yards or so—then very thin straggling groups, which in a day's march you see deepened into a shady forest. At 30 miles you enter under the impervious umbrage of a tropic forest, which grows

darker and taller, and presently impenetrable, and for 30 miles you are among the marvels of vegetable life, then you emerge among the acacias again, and 12 miles from Lake Albert Edward they disappear altogether, and you see nought but grass, decreasing in height, losing succulency, feeble and scant, until you are on the saline mud of the shore of the Upper Lake. I hope now that you perceive that I am only suggesting; I by no means assert anything except what we saw and know from observation. If the south end of Lake Albert is 1° 10′ N. lat. now, in 1864—when Sir Samuel Baker discovered it—the south end was in N. lat. 1° 7′. In the natal year of his Royal Highness the Prince of Wales, it was at N. lat. 1° 4′ 30″. Five years after Charles the First began to reign, the south end was in N. lat. 0° 40′. During the siege of Troy, the two lakes were one, and the south end of the great lake was in 1° 10′ S. lat.; and if these two lakes wear away their obstructions as they have been doing, in the year 2150 there will be no Lake Albert Edward, and in the year 2540 the Lake Albert will have vanished, and the Semliki Valley will have extended its length to 2° N. lat., and the Semliki river will have united the Victoria Nile to form the Bahr el Abiad, or While Nile.

Do you know that I hesitated to mention the discovery of the Mountains of the Moon as much as you would to confess to having seen the famous sea serpent? I was quite prepared to hear some one ready to heap ridicule on the statement; but I have since been able to fortify the assertion by inspecting the maps of the ancients—Greeks and Arabs. That they were not explored long ago is due solely to the vagaries of individual cartographers. Why, as long ago as Homer, the Mountains of the Moon, and the fountains of the Nile, and the pigmies, had been heard of and located with excellent judgment; but Hekatæus, Hipparchus, Ptolemy, Idrisi, the Portuguese, Dutch, and French cartographers, shifted these interesting features of African geography whither they listed. From 10° north of the equator they shifted the Mountains of the Moon to 20° south, and then 10° nearer to the neighbourhood of the Line, and then with a flying leap to 10° north of it. They caused the old continent to assume an exceedingly dissipated appearance in the sixteenth century, and in the seventeenth they gave it a penitent shore-line; but the crime of crimes was perpetrated in the middle of the last century, when D'Anville, a Frenchman, and other cartographers, conspired to rob Central Africa of the three lakes which had played such a part on past maps, and to draw the Mountains of the Moon as extending from the Gulf of Guinea to the Gulf of Aden. You need not wonder that during the last forty years you have heard travellers indulging in intemperate language whenever the Mountains of the Moon were mentioned.

Listen to this beautiful legend which I obtained while I was at Cairo, among many others. It is taken from a book with the taking title of 'The Explorer's Desire':—

"There is a difference of opinion as to the derivation of the word 'Gumr.' Some say that it ought to be pronounced Kamar, which means the moon. Hence Jebel Gumr—the Mountains of the Moon; but the traveller Ti Tarshi says that it was called by that name because the eye is dazzled by the great brightness. This mountain, the Gumr, extends eastward and westward into uninhabited territory on both sides. Indeed, this whole chain is uninhabited on the southern slope. This chain has peaks rising up into the air, and other peaks lower. Some have said that certain people have reached these mountains and ascended them and looked over to the other side, where they saw a sea with troubled waters dark as night (Lake Albert Edward, of course), this sea being traversed by a white stream bright as day, which enters the mountains from the north, and passes by the grave of the great Hermes, and Hermes is the prophet Idrisi, or Enoch.

"It is said that Enoch there built a dome. Some say that people have ascended the mountain, and that one of them began to laugh and clap his hands, and throw himself down on the further side of the mountain. The others were afraid of being seized with the same fit, and so came back. It is said that those who saw it, saw bright snows like white silver glistening with light. Whoever looked at them became attracted, and stuck to them until they died, and this science is called 'Human Magnetism.'

"Adam bequeath the Nile unto Seth, his son, and it remained in the possession of these children of prophecy and of religion, and they came down to Egypt (or Cairo) and it was then called Lul, so they came and dwelt upon the mountains. After them came a son called Kinaan, then his son Mahaleel, and then his son Yaoud, and then his son Hamu, and his son Hermes, that is, Idrisi or Enoch the prophet. Idrisi it was who reduced the land to law and order. He then went to the land of Abyssinia and Nubia and gathered the people together, and extended the distance of the flow of the Nile, or reduced it according to the swiftness or sluggishness of the stream. It is said that in the days of Am Kaam, one of the kings of Egypt, Idrisi was taken up to heaven, and he prophesied the coming of the flood, so he remained on the other side of the equator, and there built a palace on the slopes of Mount Gumr. He built it of copper, and made eighty-five statues of copper, the waters of the Nile flowing out through the mouths of these statues, and then flowing into a great lake, and thence to Egypt.

"Idyar el Wadi says the length of the Nile is two months' journey through Moslem territory, and four months' journey in uninhabited country; that its source is from Mount Gumr beyond the equator, and that it flows to the light coming out of the River of Darkness, and flows by the base of Mount Gumr."

There is no need for me to tell you that Jebel Gumr is Ruwenzori, the "Cloud King"; that the Sea of Darkness is the Albert Edward Nyanza,

and that the River of Darkness is henceforth to be known as the Semliki, which empties into Lake Albert, and that from the latter lake issues the White Nile, which near Khartoum joins the Blue Nile.

Another emotion is that inspired by the thought that in one of the darkest corners of the earth, shrouded by perpetual mist, brooding under the eternal storm-clouds, surrounded by darkness and mystery, there has been hidden to this day a giant among mountains, the melting snow of whose tops has been for some fifty centuries most vital to the peoples of Egypt. Imagine to what a god the reverently-inclined primal nations would have exalted this mountain, which from such a far-away region as this contributed so copiously to their beneficent and sacred Nile! And this thought of the beneficent Nile brings on another. In fancy we look down along that crooked silver vein to where it disports and spreads out to infuse new life to Egypt, near the Pyramids, some 4000 miles away, where we behold populous swarms of men—Arabs, Copts, Fellahs, Negroes, Turks, Greeks, Italians, Frenchmen, English, Germans, and Americans—bustling, jostling, or lounging, and we feel a pardonable pride in being able to inform them for the first time that much of the sweet water they drink, and whose virtues they so often exalt, issues from the deep and extensive snow-beds of Ruwenzori or Ruwenjura—"the Cloud King."

We have travelled along the north, the north-west, and eastern coasts of Lake Albert Edward. We have had abundant opportunities of hearing about the south and western sides. The south side of the lake, much of which we have viewed from commanding heights such as Kiteté, is of the same character as the flat plains of Usongora, and extends between 20 and 30 miles to the base of the uplands of Mpororo and Usongora. Kakuri's canoe-men have been frequent voyagers to the various ports belonging to Ruanda and to the western countries, and all around the lake, and they inform me that the shores are very flat, more extensive to the south than even to the north, and more to the west than to the east. No rivers of any great importance feed the Albert Edward Lake, though there are several which are from 20–50 feet wide and two feet deep. The largest is said to be the Mpanga and the Nsongi. This being so, the most important river from the south cannot have a winding course of more than 60 miles, so that the farthest reach of the Albertine sources of the Nile cannot extend further than 1° 10′ S. latitude.

Our first view, as well as the last, of Lake Albert Edward was utterly unlike any view we ever had before of land or water of a new region. For all other virgin scenes were seen through a more or less clear atmosphere, and we saw the various effects of sunshine, and were delighted with the charms which distance lends. On this, however, we gazed through fluffy, slightly waving strata of vapours of unknown depth, and through this thick opaque veil the lake appeared like dusty

quicksilver, or a sheet of lustreless silver, bounded by vague shadowy outlines of a tawny-faced land. It was most unsatisfying in every way. We could neither define distance, form, nor figure; estimate height of land-crests above the water, nor depth of lake; we could ascribe no just limit to the extent of the expanse, nor venture to say whether it was an inland ocean or a shallow pond. The haze, or rather cloud, hung over it like a grey pall. We sighed for rain to clear the atmosphere, and the rain fell; but, instead of thickened haze, there came a fog as dark as that which distracts London on a November day.

In brief words, the north-west and west sides of Ruwenzori, blessed with almost daily rains and with ever-fresh dews, enjoy perpetual spring, and are robed in eternal verdure; the south and south-west sides have their well-defined seasons of rain and drought, and if seen during the dry season, no greater contrast can be imagined than these opposing views of nature's youth and nature's decay.

But, alas! alas! in vain we turned our yearning eyes and longing looks in their direction. The Mountains of the Moon lay ever slumbering in their cloudy tents, and the lake which gave birth to the Albertine Nile remained ever brooding under the impenetrable and loveless mist.

The question has been asked by stolid and thoughtless people—What good has been derived from our late expedition, which less than a year ago was about commencing its long march to the sea from Lake Albert? and I answer that to humanity the gain has been great. The world is richer by the knowledge that there are 10,000 million more trees in it than we knew of before; that there are exhaustless quantities of rubber and gums, and dye-stuffs; that there is navigation furnished by nature, by which those interested in these treasures can proceed to collect them; and that by these vegetable products the millions of degraded human beings within that great forest will in process of time learn that their fellow creatures have far vaster value than the value of their flesh.

As a Christian nation you should rejoice that the few thousands of pounds you lent for this service rescued over 400 men, women, and children from slavery; that you restored 290 people to their homes in Egypt; that you restored the late Governor, stagnating among the impossibilities, to active service for a friendly nation; and a gallant captain and explorer to his countrymen of Italy, and a merchant Greek to his family; and I am quite sure that you begrudge your bounty as little as we our service. Thirdly, as geographers, you must be gratified with the wide extension of geographical knowledge gained. The Aruwimi river is known almost throughout its entire length; you know the extent of that immense forest; you know the connecting link of water between the two lakes along the course of the Albertine Nile; the classic river the source of which Alexander, Cambyses, Cæsar, and Nero desired to know, you now know to its very fountain head; those lofty

Mountains of the Moon, which have been so anxiously sought for since Homer's time, have now been surveyed and located. The most glorious portions of Inner Africa have been traversed and described for the first time; and we know that there is scarcely an acre throughout the area but is a decided gain to our earth; and I assert that every mile of new lands traversed by us will serve in the coming time to expand British commerce, and stimulate civilised industry. And, finally, we have extended British possessions to the eastern limits of the Congo Free State, having acquired many a thousand square miles of territory for the assistance, by force of arms and other considerations, against their enemies the Warasura.

Our promise had been, on setting out on this expedition, to do as little harm and as much good as possible. We, therefore, submit these bare outlines of our service, hoping that they will be acceptable to you.

The meeting at which the foregoing paper was read was convened also with the intention of welcoming Mr. H. M. Stanley on his return to England, after his successful expedition across Africa for the relief of Emin Pasha. The Fellows of the Society and their friends and guests invited by the Council assembled to the number of 6200; and the meeting was honoured by the presence of their Royal Highnesses the Prince and Princess of Wales, the Duke of Edinburgh, and many other members of the Royal Family, besides numerous distinguished representatives of Science, Art, Literature, Politics, Law, and Commerce, and Presidents or Delegates of Provincial and Foreign Geographical Societies. A large map, 60 feet from east to west and 30 feet from north to south, showing the route of the expedition from sea to sea and the broader physical features of Equatorial Africa, with the names of the chief features visible from all points of the hall, was displayed behind the platform, and 6000 copies of a folding hand-map, printed on thin cardboard, were distributed among the audience.

The chair was taken by the PRESIDENT, the Right Hon. Sir MOUNTSTUART E. GRANT DUFF, G.C.S.I., who in opening the proceedings spoke as follows:—

Your Royal Highnesses, Ladies, and Gentlemen,—Those who have welcomed or will still welcome Mr. Stanley have, or will have, regard chiefly to the philanthropic, to the commercial, or to the political possibilities of the future. I suppose that most of us as individuals are interested in one or other or all of these matters; but the Geographical Society, as a society, is interested only in the extension of man's knowledge of his environment. It is because Mr. Stanley has done so much to extend that knowledge that we have convened this enormous gathering, far the largest which has ever come together under our auspices. Of Mr. Stanley's recent travels I will say nothing. He is here to tell you about them himself. I should like, however, in a single sentence, to record the principal things which Mr. Stanley did for geographical science before he entered upon his recent expedition. In the first place, along with Livingstone—a name never to be mentioned without honour—he explored the northern portion of Lake Tanganyika and settled the question, then much debated amongst geographers, whether the Nile did or did not take its rise in those ample waters. That question he settled in the negative. Then, upon his second expedition, he traced down the Shimeyu river, which flows from the south about 300 miles into the Victoria Nyanza, and is accordingly one of the

ultimate sources of the Nile. Thirdly, he circumnavigated the Victoria Nyanza, which is only a very little smaller than Lake Superior, the largest of the fresh-water seas of the world. Fourthly, he discovered a new lake, which he has now named in honour of His Royal Highness, on whose presence we congratulate ourselves to-night. Next he circumnavigated Lake Tanganyika, and examined its then dry outlet the Lukuga, discovered a few months previously by Lieutenant Cameron, and sagaciously concluded that it would again, as shortly afterwards happened, discharge its waters into the Lualaba. Then he traced the Lualaba itself, and settled the question which possessed the mind of Livingstone so much in his last years: what the Lualaba really was—whether it was the Nile or the Congo. Mr. Stanley proved, by following it down to the Atlantic, through an Odyssey of wandering and an Iliad of combat, that it was the Congo; and by that means he threw open to the enterprise of civilised man a territory fully as large as that of British India. These are mighty achievements, and it must be remembered that in all of them, as in this last journey, which has been equally fruitful of geographical discovery, Mr. Stanley was his own surveyor, his own astronomical observer, and the recorder of his own actions. You will then not think it surprising, and I am certain that I shall have the full support and sympathy of every person here present when, in the name of the Royal Geographical Society, and by its authority, I give its warmest thanks to Mr. Stanley for what he and his companions have done for geographical science. We thank him and we thank them all, white or black, living or dead. That gifted man, too early lost to geographical science, to letters, and to the State, the last Lord Strangford, said of Mr. Gifford Palgrave, when the latter returned from Arabia and recounted his journeys to us, that there had been nothing like it since Herodotus recited at Olympia. I do not know whether Herodotus ever really recited at Olympia. Of this I am certain, however, that if he did so, he did not address an audience either so numerous or so distinguished as that which is here assembled; and in all that mighty audience there is not one single human being who is not delighted to see and impatient to hear the illustrious explorer whom I now invite to address you.

On the conclusion of Mr. Stanley's Address,*

H.R.H. The Prince of Wales said:—Ladies and Gentlemen,—By the permission of our President, a task has been confided to me, which is both an easy and a difficult one. It is an easy one, inasmuch I shall have the pleasure to propose to you a hearty vote of thanks to Mr. Stanley for the interesting address he has given us, but I feel it should have been placed in worthier hands to propose this vote of thanks. We have, I know, all listened with profound attention and interest to the address which has fallen from Mr. Stanley. It is marvellous to me that in the short space of time which he had, he was able to give us so much valuable and interesting information. His name must ever go down to posterity as one of our great travellers, and I may say philanthropists, and one whom I feel sure the Royal Geographical Society will ever be proud of. I would further remind you that fifteen years ago, under the auspices of the *New York Herald*, Mr. Stanley went out to look for the great traveller, Livingstone, and succeeded in finding him. Since then he discovered the Congo, which has become now a great Free State; and last, not least, he was sent by some philanthropic gentlemen to try and find, and to release the last of the ever-to-be-regretted Gordon's lieutenants—Emin Pasha, in which he succeeded. We have heard to-night, and I have had also opportunities of hearing from him on other occasions, the terrible difficulties he had to undergo in

* *Ante*, p. 313.

reaching his last object. He has told you of the great equatorial and almost impenetrable forest, 621 miles in length; he has told you also of that wonderful race, the Pigmies, who have existed, he says, for fifty centuries, and who I think were perhaps more instrumental in lengthening his journeys than any other cause. He has also told you—a matter of great interest—of the actual position of the Mountains of the Moon, which have been described to us by the ancients as placed in various positions. I do not profess in any way to claim the proud right of addressing you as a geographer, but at the same time, it affords me sincere satisfaction that the task, however shortly and imperfectly I have carried it out, has been imposed upon me, to ask you most cordially not only to vote a hearty and unanimous expression of thanks and gratitude for the admirable and interesting address which we have heard to-night, but also to extend to Mr. Stanley a hearty welcome on his return after his long and arduous journey, and to beg that that extension may also be given to those brave and distinguished gentlemen whom I see here to-night, who accompanied him on his journey.

H.R.H. The Duke of Edinburgh said:—Ladies and Gentlemen,—I am sure if the Prince of Wales found himself in any difficulty with regard to proposing the vote of thanks which I have now the pleasure to second, I feel myself in a still greater difficulty in having to follow the speech which he has made, for he has touched upon every subject which the interesting address of Mr. Stanley contained, and I feel myself, therefore, in great difficulty in saying anything further, excepting that on the occasion when we first had the opportunity of hearing him at St. James's Hall, he gave us a description of his work in connection with the Relief Committee that sent him out, and here he has given us more directly information in connection with the Society which has met here this evening. The description of the forest through which he travelled, I am sure was one which was very impressive. Its climate and light seem to have been such that one would prefer the London fog which he alluded to. But the great value of the information which we have before us this evening is the completion of the map across the whole of the continent, which map has been so much distorted in previous times. I fear I have no other words to add in seconding this vote of thanks, excepting my own most cordial welcome to him and his colleagues on their return from their arduous journey.

The vote of thanks was carried amid great applause.

The President, rising again, said:—In the year 1873 the Royal Geographical Society assigned its gold medal to Mr. Stanley. By doing that it exhausted all its ordinary powers of honorific distinction; but the Council of the Society has come to the conclusion that Mr. Stanley had done so very much more since that time than he did before it, that it was their duty to assign to him another medal for his later work. Mr. Stanley would not wish, and the Society would not wish, that that honour should appertain only to him. They have accordingly awarded medals to all his gallant companions. Mr. Stanley's medal, specially designed for the purpose, has been made of British gold, which has been given for the express purpose by Mr. Pritchard Morgan, who desires thereby to show his admiration for Mr. Stanley's achievements. For his companions, medals of the same design have been struck in bronze. The Society will also like to know that the Council has thought it right to assign marks of honour to all the Zanzibaris and other natives who have accompanied Mr. Stanley across the continent of Africa. The distinction to be assigned to them will take the form of a silver star with a suitable inscription. I have now to request the Prince of Wales to be so good as to present the medals to Mr. Stanley and his companions.

H.R.H. The Prince of Wales then presented the medals to Mr. Stanley, Lieut. Stairs, Dr. Parke, Captain Nelson, Mr. Jephson, and Mr. Bonny.

Mr. STANLEY responded for himself and his companions as follows:—Mr. President, Your Royal Highnesses,—It has been said that no great work was ever done through hate, and neither was it done for hire, but it has been done through love, and you will have to accept what I have done as having been done solely through love of the work I was appointed to perform. It was a former President of this Society who sent Dr. Livingstone on his last fatal journey. I spent four months and four days with him, when I had the pleasure of hearing a good many things about this Society for the first time in my life. Among many other things of which I have a keen recollection are the gorgeous entertainments sometimes given by the Royal Geographical Society to its explorers, but he did not say very much about the medals. I have seen the medals since I have returned, and to-day I have got the grandest, the noblest, the biggest of all, and it has been presented by H.R.H. the Prince of Wales to me, which lends additional honour to it. The presence of those who have gathered here to welcome me after my last journey also enhances the value of the gift. This grand galaxy of beauty and talent will vividly impress the occasion on my memory. I beg to express to you my best thanks, and if my companions will permit me, to thank you in their name also.

In conclusion, the PRESIDENT said:—I am sure it would be the desire of all present that I should express your thanks to their Royal Highnesses the Vice-Patron and Honorary President for having attended and taken part in the proceedings. The meeting is now adjourned.

Ascent to the summit of Kilima-njaro.

By Dr. HANS MEYER.

(Read at the Evening Meeting, April 14th, 1890.)

Map, p. 372

AN orographical map of Africa shows at the first glance that the backbone of that continent lies in the east, facing the Indian Ocean, whilst its main body, with its arterial system of huge rivers, stretches away to the westward, far into the Atlantic. The eastern highlands, beginning at the head of the Gulf of Suez, first follow the shore of the Red Sea through Nubia and Abyssinia, then extend through Enarya, Kaffa, and the regions of the Kenia and Kilimanjaro as far as the watershed between Tanganyika and Nyassa, whence, trending to the westward, they form the height of land separating the basin of the Congo from that of the Zambezi. This eastern rim of the dark continent presents thus, as it were, a reflected image of the Andes lying on the western flank of South America. In these African highlands, however, very different from what we meet with in the Andes, mountains and mountain ranges play quite a subordinate part, plateaus and table lands being the most prominent feature. Where bold mountain masses rear their heads above the general level, as in Abyssinia and under the Equator, they point to the activity of volcanic forces. Elsewhere in Africa volcanic rocks are met with, but nowhere on so vast a scale as in the east, and nowhere else

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